

Amendment

In the Claims

Claims 1-43. (Canceled)

44. (Withdrawn) A method of recruiting progenitor cells to a site in the body of a subject comprising:

introducing at the site in the body of the subject an implant comprising an external porous housing having pores of a size sufficient to allow movement into the implant of the progenitor cells to be recruited and a drug delivery system contained within the housing, wherein the drug delivery system comprises one or more factors selected from the group consisting of growth factors, angiogenic/vasculogenic factors and bone marrow recruiting factors, and

allowing sufficient time for the progenitors cells to migrate to and enter the implant.

Claim 45. (Canceled)

46. (Withdrawn) The method of claim 45, wherein the external porous housing is composed of a polymeric mesh and the drug delivery system comprises a plurality of microspheres, microparticles, nanospheres, macrospheres, nanoparticles, macroparticles, matrices, beads, films, rods, coatings or hydrogels.

47. (Withdrawn) The method of claim 46, wherein the polymeric mesh is composed of one or more polymers selected from the group consisting of nylon, poly-L-lactide (PLA), poly(lactide-co-glycolide) (PLGA), poly(fumaric acid:sebacic acid) co-polymer and polycaprolactone.

48. (Withdrawn) The method of claim 44, wherein the angiogenic/vasculogenic factors are selected from VEGF-A, VEGF-B, VEGF-C, VEGF-D, VEGF-E, aFGF, bFGF, angiopoietin-1, angiopoietin-2, angiogenin, Del-1, follistatin, HGF/SF, leptin, midkine, PLGF, PD-ECGF, PDGF-BB, PTN, progranulin, proliferin, TGF-alpha, TGF-beta, TNF-alpha, IGF-1 and IGF-2, and the bone marrow recruiting factors are selected from GM-CSF, G-SCF, SDF-1a, SDF-1b, MCP-1, stem cell factor/kit ligand, M-CSF, IL-8, SF20 and HCC-1.

49. (Withdrawn) The method of claim 44, wherein the one or more factors are GM-CSF and VEGF.

50. (Withdrawn) The method of claim 44, wherein the progenitor cells are selected from endothelial progenitor cells, hematopoietic progenitor cells, hemangioblasts, neural progenitor cells, and epithelial progenitor cells.

51. (Withdrawn) The method of claim 44, wherein the hematopoietic progenitor cells are CD133+ or CD34+ cells.

Claims 52-54. (Canceled).

55. (Currently amended) An implant for recruiting progenitor cells to a site in the body of a subject comprising an external porous housing having pores of a size sufficient to allow movement into the implant of the progenitor cells to be recruited and a drug delivery system comprises a plurality of particles having a diameter ranging from 10 nanometers to 10 microns ~~macroparticles, matrices, beads, films, rods, coatings or hydrogels~~, wherein the ~~drug delivery system comprises~~ particles comprise one or more cytokines ~~one or more factors selected from the group consisting of growth factors, angiogenic/vasculogenic factors and bone marrow recruiting factors.~~

56. (Previously presented) The implant of claim 55, wherein the external porous housing is composed of a polymeric mesh.

57. (Previously presented) The implant of claim 56, wherein the polymeric mesh is composed of one or more polymers selected from the group consisting of nylon, poly-L-lactide (PLA), poly(lactide-co-glycolide) (PLGA), poly(fumaric acid:sebacic acid) copolymer and polycaprolactone.

58. (Withdrawn) The method of claim 55, wherein the angiogenic/vasculogenic factors are selected from VEGF-A, VEGF-B, VEGF-C, VEGF-D, VEGF-E, aFGF, bFGF, angiopoietin-1, angiopoietin-2, angiogenin, Del-1, follistatin, HGF/SF, leptin, midkine, PLGF, PD-ECGF, PDGF-BB, PTN, progranulin, proliferin, TGF-alpha, TGF-beta, TNF-alpha, IGF-1 and IGF-2, and the bone marrow recruiting factors are selected from GM-CSF, G-SCF, SDF-1a, SDF-1b, MCP-1, stem cell factor/kit ligand, M-CSF, IL-8, SF20 and HCC-1.

59. (Withdrawn) The method of claim 55, wherein the one or more factors are GM-CSF and VEGF.

60. (Withdrawn) The method of claim 55, wherein the progenitor cells are selected from endothelial progenitor cells, hematopoietic progenitor cells, hemangioblasts, neural progenitor cells, and epithelial progenitor cells.

61. (Withdrawn) The method of claim 60, wherein the hematopoietic progenitor cells are CD133+ or CD34+ cells.

Claims 62-64. (Canceled).

65. (Withdrawn) The method of claim 46, wherein the polymeric mesh is formed of one or more polymers selected from the group consisting of polyamides, polyesters, polypropylene, fluorocarbons, and proteins.

66. (Withdrawn) The method of claim 44, further comprising removing the implant from the subject and isolating the progenitor cells.

67. (previously presented) The implant of claim 56, wherein the polymeric mesh is formed of one or more polymers selected from the group consisting of polyamides, polyesters, polypropylene, fluorocarbons, and proteins.

68. (New) The implant of claim 55, further comprising one or more factors selected from the group consisting of growth factors, angiogenic/vasculogenic factors and bone marrow recruiting factors.

69. (New) The implant of claim 55, wherein the angiogenic/vasculogenic factors are selected from the group consisting of VEGF-A, VEGF-B, VEGF-C, VEGF-D, VEGF-E, aFGF, bFGF, angiopoietin-1, angiopoietin-2, angiogenin, Del-1, follistatin, HGF/SF, leptin, midkine, PLGF, PD-ECGF, PDGF-BB, PTN, progranulin, proliferin, TGF-alpha, TGF-beta, TNF-alpha, IGF-1 and IGF-2, and wherein the bone marrow recruiting factors are selected from the group consisting of GM-CSF, G-SCF, SDF-1a, SDF-1b, MCP-1, stem cell factor/kit ligand, M-CSF, IL-8, SF20 and HCC-1.

70. (New) The implant of claim 55, wherein the particles comprise one or more biodegradable polymers.

71. (New) A plurality of particles for recruiting progenitor cells to a site in the body of a subject, wherein the particles having a diameter ranging from 10 nanometers to

10 microns, wherein the particles comprise one or more cytokines, and wherein the cytokines are released *in vivo* from the particles in a controlled or sustained manner.

72. (New) The plurality of particles of claim 71, further comprising one or more factors selected from the group consisting of growth factors, angiogenic/vasculogenic factors and bone marrow recruiting factors.

73. (New) The plurality of particles of claim 72, wherein the angiogenic/vasculogenic factors are selected from the group consisting of VEGF-A, VEGF-B, VEGF-C, VEGF-D, VEGF-E, aFGF, bFGF, angiopoietin-1, angiopoietin-2, angiogenin, Del-1, follistatin, HGF/SF, leptin, midkine, PLGF, PD-ECGF, PDGF-BB, PTN, progranulin, proliferin, TGF-alpha, TGF-beta, TNF-alpha, IGF-1 and IGF-2, and wherein the bone marrow recruiting factors are selected from the group consisting of GM-CSF, G-SCF, SDF-1a, SDF-1b, MCP-1, stem cell factor/kit ligand, M-CSF, IL-8, SF20 and HCC-1.

74. (New) The plurality of particles of claim 71, wherein the particles comprise one or more biodegradable polymers.